Electricity on the Farm

A Monthly Magazine for the Progressive Rural Family

SEPTEMBER
1932

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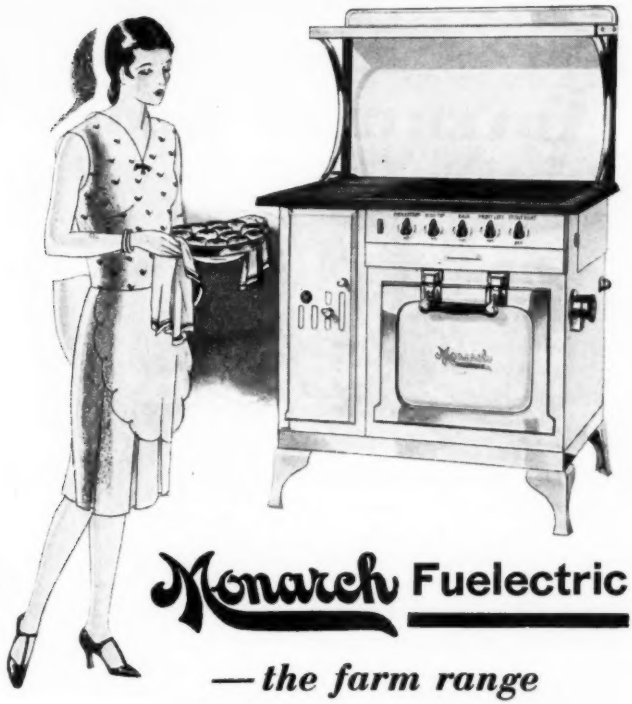

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ADVERTISING BUILDS BUSINESS
AND PROTECTS THE CONSUMER

Reducing Labor Costs

It has been a revelation to business men, manufacturers and farmers during the past two years how much expense they have been able to do away with through the elimination of non-essentials. It requires a period of depression to improve efficiency in industry, though a depression of the severity of that being experienced at the present time is far more acute than necessary.

Many business offices as well as factories have been surprised to find that they could get along without some of the help which was formerly considered indispensable. Others have found that replacing hand labor by machinery proves highly profitable.

Hired help is expensive in agriculture too, in many cases representing the biggest cash outlay of the farm. The elimination of hired help has proven the salvation of many of the smaller farms.

In one small farming area in Michigan, for example, the hired man was found no longer necessary after the dairy building had been electrified, and electric milking machine, power driven separator, electrical refrigeration and modern utensil sterlizer were put in service. The housewife found that she could get along without a hired girl in summer after the installation of an electric water system, an electric refrigerator, a washing machine, a vacuum cleaner, a range, and electric lights.

Electric servants are by far the cheapest help on the modern farm. They do the work better than hand labor and they are available 24 hours each day. Thus is explained the phenomenal and the continued growth in the use of electric power in farming districts.

A COLONIAL FARM

As told by J. F. Ham to
TRUMAN E. HIENTON

Not only has electricity been installed to lighten labor indoors and out, but accurate records have been kept to determine just what electricity could do and at what power consumption.

"SEEING is believing" is an old saying which may be true of farm electrical equipment but *knowing* what this equipment will do, the labor it will save, and the amount of current it will use is of equal and perhaps greater importance to present and prospective users of such equipment.

Scattered throughout the country are a number of farms on which such information is being secured by metering individual equipment and keeping records of its operation and the amount of work done. Located in the Hudson Valley within a two-hour ride of the world's largest city, New York, is the farm of John M. Ham and Son on which valuable information of this type has been secured for nearly three years.

"Lynfeld," the name of this Dutchess County electric demonstration farm, is unique in that it has been owned continuously since 1745 by succeeding Ham heirs. It is now the home of the seventh generation of the family, which is directly descended from the original purchaser. Mr. J. Frederick Ham, the present farm operator, is a graduate of the Agricultural College of Cornell University and a keen student of modern farming methods. He continues the policy established by his father in 1886 of operating the farm primarily for milk production, with a herd of 70 registered Holsteins, 40 of which comprise the milking herd. Sale of some surplus hay and the products of a small apple orchard are the other sources of income from the farm besides that of the milk produced.

Recognizing the need for securing facts on the use of farm electric equipment, the Central Hudson Gas and Electric Corporation of Poughkeepsie, on whose lines Lynfeld is located, arranged with Mr. Ham for co-operation in using his farm for test and demonstration work for a period of five years. Meters were installed and records begun September 1, 1929 with the Dutchess County Farm Bureau and the State College Extension and Agricultural Engineering departments acting in an advisory capacity.

Typical Equipment

Farm electric equipment in use at Lynfeld is very typical of that which is practical for use on modern dairy farms today whether located in New York, California, or at any intermediate point between them. Barn lights, small appliances such as clippers and drill press, water pump, milking machine, milk cooler, dairy water heater, ventilators, farm shop, and a portable farm motor for driving the silo filler, feed grinder, wood saw, hay hoist, and concrete mixer are all electrically operated.

RM GOES MODERN

Much of the household electric equipment in the Ham homestead may be found in many American farm homes today and, in occasional cases, all of the items are available. A range, water heater, refrigerator, washer, ironer, ventilator, cleaner, iron, fan, lighting, radio, and sewing machine, all electrically operated, aid in reducing labor in household tasks and in making the house more convenient and comfortable. The toaster, percolator, and waffle iron which are electrically heated find regular, if not daily, use in this as in other farm kitchens.

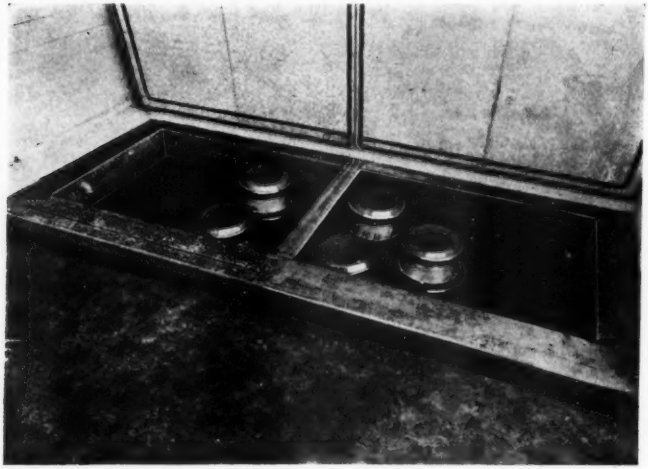
Performs Huge Task

Work done by electric power on this farm during the course of a year is almost astounding when the total amounts are inspected. Gallons of water pumped during one year totaled 419,000, a considerable amount but a quantity which would have seemed much larger if it had been pumped by hand and then carried or hauled to its place of use. Strangely enough the amount of energy required to do this pumping, 425 kilowatt-hours, is ridiculously small when compared with the amount of work done in pumping and transporting nearly 1,750 tons of water to various parts of the farmstead.

Second perhaps in importance to water pumping is the item of milking. During the year, in which work records were kept of the work done, September 1, 1929 to August 31, 1930, a total of 18,834 cows were milked, or an average of nearly 26 cows per milking. Here again the quantity of electric current used was surprisingly low for the average amount required per milking was just slightly more than one kilowatt-hour (1.04), for the entire number.

Cooling the milk produced on the farm is accomplished entirely by electric refrigeration in an insulated cooling tank. Nearly 60 tons of milk were cooled in a year this modern way, directly in the cans. Proper cooling is an important aid

The Ham Homestead



Milk cooling tank.

Portable motor filling silo

in the production of high quality milk and this method of refrigeration is increasing in favor where the producer sells his milk at wholesale. Current used for cooling milk was relatively low amounting to 1.30 kilowatt-hours per 100 pounds.

Of equal importance with refrigeration in the production of high grade milk is cleanliness. Hot water is necessary to properly clean milking machine units and an electric water heater in the dairy barn or milk room provides the hot water conveniently and with a minimum of fire hazard. One kilowatt-hour heated an average of 2.7 gallons of water through a temperature rise of 118 degrees F. during one year's records on the Ham farm.

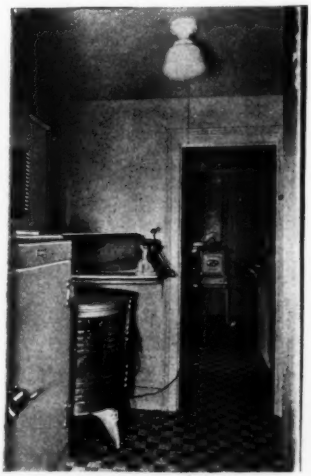
Utility Motor Kept Busy

Power for driving the silo filler, feed grinder, wood saw, hay hoist, concrete mixer, and hay press are furnished by one 7.5-horsepower motor. Work done by machines driven by this motor indicate the possible uses for which one single motor may be employed on a dairy farm. During one year this motor furnished power for cutting and elevating 340 tons of silage, grinding nearly 10 tons of grain, sawing 31 cords of wood, hoisting 90 tons of hay, running the concrete mixer several hours, and pressing 48 tons of hay with a total consumption of 703 kilowatt-hours. On a unit basis, 0.94 kilowatt-hour was used per ton of silage cut, 1.02 kilowatt-hour per 100 pounds of grain ground, 2.8 kilowatt-hours per cord of wood sawed, 0.47 kilowatt-hour per ton of hay hoisted, and 0.73 kilowatt-hour per ton of hay pressed. These figures illustrate very forcibly the economy of using electric power for such work.

Electric ventilating fans are employed in the dairy barn and were used during nine months of the year. These are of particular importance during winter months in exhausting air from the barn to prevent the collection of moisture on walls and ceiling. Temperature control devices make their operation automatic and such equipment is being installed in many barns to replace other methods of ventilation. Current used amounted to 2,119 kilowatt-hours during the first year.

Lighting of the barn and operation of small appliances such as the clipping machine, while very important uses in the dairy barn, required only 228 kilowatt-hours during the entire year. Of these, 202 were used during the six months beginning in October, indicating that, on a dairy farm particularly, lighting is used mostly during the short days of winter, and consequently fills an important need.

Use of electric power on the farm is often justified on the basis of cost alone and since this may frequently be done in the farm household as well, the records obtained of current used and work done in the Ham household is of interest. Washing and ironing are two tasks which are heavy ones on every farm and more especially on dairy farms. A total of 149 individual washings and ironings with the electric washer and electric ironer were done in this household during one year using



Showing the washer, ironer, refrigerator and kitchen lighting units.

132 kilowatt-hours or less than one per individual washing and ironing.

Cooking is done on an electric range during the entire year and 3201 individual meals were served in that length of time, an average of nearly three persons per meal for every meal in the year. The amount of current used by the range totaled 1262 kilowatt-hours for the year or slightly less than three individual meals per kilowatt-hour.

Modern Refrigeration

Refrigeration for the household as well as cooking is a year 'round job for electricity on the Ham farm. The electric refrigerator used 560 kilowatt-hours during an entire year, an average of 46.7 per month. Greatest consumption occurred during July when 61 were used and least in November when only 33 were used. Many farm women are finding it practically impossible to operate their households without refrigeration during the entire year and are using their electric refrigerators during the winter as well as the summer.

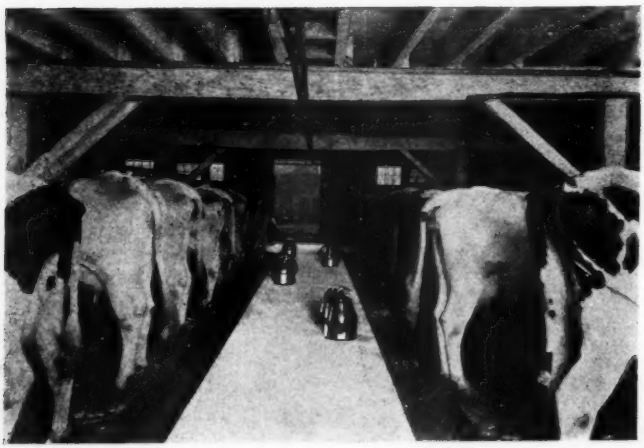
Kitchen ventilators are found less frequently in farm kitchens than other items of electric equipment but there is one at Lynfeld and like the range and refrigerator is used throughout the year. While the amount of current used by the ventilator during the year; 44 kilowatt-hours, is surprisingly small, the hours of operation, 596, are surprisingly large. It is especially interesting to note that the use of this article is practically uniform throughout the year.

For Small Appliances

Use of electricity for house lighting and small appliances, such as toaster, percolator, and waffle iron amounted to 374 kilowatt-hours per year, with the heaviest consumption coming during the winter months as might be expected with the lighting included. Records on the radio were available for only eight months of the year beginning in January. During that time 52 kilowatt-hours were used and the radio was in operation 605 hours, or nearly 12 hours service per kilowatt-hour.

Hot water for the house is provided by an automatic electric heater provided with a 60-gallon

(*Continued on page* 16)



Dairy barn showing the purebred herd and electric milking machines.

Electricity can be used to advantage

ON THE SMALL FARM

By J. P. SCHAENZER and C. C. BELL

THE family of Fred Rakow, Marathon County, Wisconsin, consists of five people living on a 120-acre farm, 50 acres of which are under cultivation. The other 70 acres are in pasture and a woodlot. The dairy herd consists of 23 head of which 16 are milch cows. The brood sows raise Spring and Fall litters, and an average of 20 hogs kept on the farm throughout the year. A flock of 150 laying hens help increase the farm income. Two horses and a 2-plow tractor are used to cultivate the land.

The Rakow farm, Fig. 1, began to receive high-line service in May, 1929. A 5 kva transformer serves two customers who live directly adjacent to each other. The connected load for all of the lights used on the farm is 3,000 watts and for the electric appliances and motors, 17,012 watts. The average use of electricity amounts to 295 kilowatt hours a month.

Helps All

Asked what he knew of electricity for farm use, Mr. Rakow replied, "All of the members of our family are able to accomplish more with the help of electricity. The milking machine and good lights in the barn reduce the time of doing chores and so give us more time in the evening to read the newspaper, visit with the neighbors, or go to the city to see a motion picture show. Electricity is doing the hard part of the work in many cases, and our tractor helps us a great deal, so that we do not get as tired as we used to. This enables us to work longer hours when necessary."

The portable five horsepower motor plays an important part in getting many jobs done about the farmstead. One of the most novel of these, and very unusual, is cutting up all of the straw at threshing time and blowing it into a bent of the hay barn for winter use. A 2-plow tractor operates the 30" by 48" threshing machine. The stacker of the threshing machine was removed and a carrier put in its place. The latter was secured from an old pea viner and cut down to an 8-foot length. The carrier takes the straw as it comes from the threshing machine and drops it into the feed table of a 16" cylinder type ensilage cutter. A 5½" pulley on the portable five horsepower motor drives the cutter through a 21" pulley. The fan operates at a speed of about 770 revolutions per minute. The straw is cut in 1" lengths.

When Mr. Rakow was asked why he used this method on his straw, he said, "By cutting the straw into short lengths it takes up much less storage space and it is possible for us to keep it all inside. If it were not cut, we would have to keep at least a part of it outside. When stored outside, there is always considerable loss. By keeping the straw inside of the barn, we never have to go out after it or dig it out of the snow. When cut into short lengths, it makes much nicer bedding, we can handle and distribute with a bushel basket, and it absorbs more moisture. It stays under the cows better and so we need much less bedding than when we use long straw, and it keeps the cows cleaner. It is also much easier to handle the manure. Because of the short

Fig. 1. Nearly 300 kilowatt-hours of electricity are used on the Rakow farm each month.

straw, we can get along with one less horse on the spreader than when long straw is used, and we do a much better job of harrowing it into the soil.

"Last fall we threshed 35 loads of oats and barley, about half and half, yielding 750 bushels of grain. We did it in ten hours and when the threshing was finished, all of the straw was cut up and stored away. Two neighbors have also adopted this practice for the past two years and are more than pleased with the results."

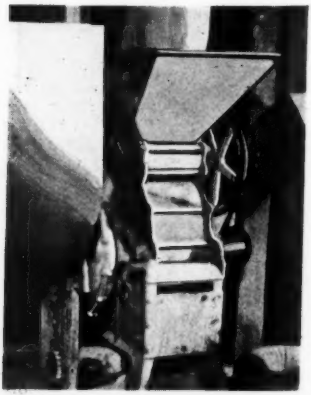


Fig. 2. A home-made hopper feeds the grain into the fan of the hammer mill which blows it to an overhead bin.

Mixing and Grinding

Grinding the barley and oats which are grown on the home farm is another job for the 5 horsepower portable motor. Two and one-half years ago, a hammer type feed mill was installed to do this work. A special hopper, Fig. 2, has been provided for this mill so that the whole grain can be fed into the fan and elevated to the floor above. From there it runs down into the mill for grinding. The "goose-neck," which, when grinding grain, carries the ground feed to the fan, is removed, and the hopper put in its place. As baskets of barley and oats are alternately placed in the hopper in the elevating process, a thorough mixture is secured in the ground feed. In order that the ground feed may be fresh at all times, small quantities of grain are ground about twice a week. As the grain is ground, it is blown into a bin from which it runs down a chute to the dairy barn below. The commercial concentrates are fed separately to the cattle and are not mixed in with the homegrown ground grain.

During the haying season, the 5 horsepower portable motor is used on double drum hay hoist. This saves the time of one man and a

team, and does the work quicker than when horses are used. The hoist not only pulls the hay up into the mow, but also returns the empty fork to the man on the wagon. This returning of the fork is the greatest time saver in the unloading process. The time of unloading is about ten minutes necessitating six forkfuls to the load. About 50 tons are put up annually and the whole job takes only about 12 kilowatt hours of electricity.

Sawing Wood

The home of the Rakow family is furnace heated. As they have their own woodlot, wood is used for fuel. Here again the 5 horsepower motor comes into action and furnishes the power for sawing the wood. For the most economical results this usually requires a crew of four or five men. The energy consumption varies from 0.5 to over one kilowatt hour per cord of wood sawed.

Filling the Silo

The same ensilage cutter that cuts up the straw at threshing time is used several weeks later in the fall to fill the 10′ x 24′ silo with corn. It holds about 30 tons. Last year three teams with drivers and one pitcher in the field were used The job was finished in less than one-half day. The total energy used was 22 kilowatt hours, or 0.73 kilowatt hours per ton.

Milk and Water

In the dairy barn, a ¼ horsepower electric motor operates a pipe line milking machine. Two single units are used to milk 16 cows. A ½ horsepower motor operates a pump jack that pumps water into an overhead tank located on the haymow floor. As an open stock tank is used for this purpose, it is inexpensive and yet supplies considerable storage. When the tank was installed, the floor boards were removed and the tank set directly on the joists. A cover was provided for the tank and then it was boxed in so as to prevent the hay from getting into it, and, at the same time to permit repairs or any changes if necessary. This arrangement permits the animal heat to circulate about the tank, and being insulated from above by the hay, prevents the contents from freezing in the winter time. The water is piped from this tank to the drinking cups for the cattle. This is considered an ideal installation, as the low pressure prevents the cups from squirting or leaking.

A ventilating fan operated with a 1/20 horsepower motor exhausts the foul air and moisture through a flue from the dairy barn. By getting rid of the bad odors, it

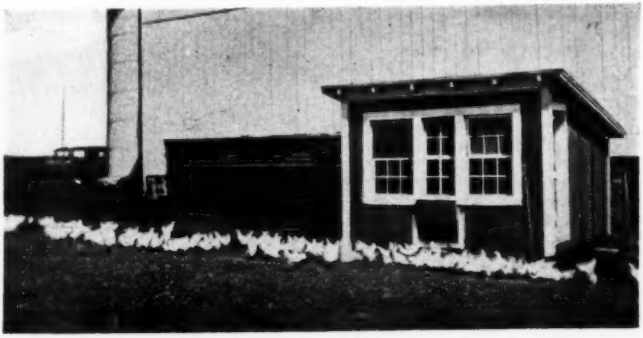


Fig. 3. Electricity furnished the heat for brooding these chicks.

makes the barn a much more pleasant place to work. Through thorough ventilation the life of the timbers and woodwork will be increased as they will stay much drier and so last much longer.

Electricity is also used on this farm in connection with poultry production. One hundred and fifty hens are lighted during the short days of the late fall and winter. Although very inexpensive, Rakow has found this method to be very profitable in increasing egg production. This is especially true in view of the fact that the eggs are laid during the winter months, the time of the higher egg prices. The increased profits from the hens have helped very materially in paying for the extra expense involved in securing electricity for farm use.

Baby chicks are also brooded electrically on this farm, Fig. 3. Last spring, 238 or 93 percent of 255 white Leghorns which were started were raised in a 42-inch round electric brooder. A total of 85 kilowatt hours of electricity were used to brood these chicks 44 days from April 1 to May 14, or 35.7 kilowatt hours per 100 chicks raised.

The shop is equipped with two motors, a 2 and a ¼ horsepower size. The larger motor is used on a saw to rip lumber which is used about the farm. It can also be belted to a large power grinder which is used to sharpen the plow shares during the plowing season. The ¼ horsepower motor is used on a small grinder, buffer, and drill.

Helps in the House

Electrical equipment also helps Mrs. Rakow with her housework. A range with an automatic time and temperature control saves her about one-half hour per day as compared with the wood stove which she had. It is no longer necessary to keep the milk, cream, butter, and vegetables in the cellar, as the electric refrigerator keeps the food in excellent condition for a long time.

A shallow well hydro-pneumatic water supply system operated with a ¼ horsepower motor furnishes water under pressure to the kitchen, laundry, and bathroom. The washing machine and iron lighten the laundry work considerably in addition to cutting down the time required to do this work. The vacuum cleaner does its share in keeping the home clean. The toaster, percolator, and popcorn popper assist in preparing tasty food.

In the evening when the work is done and all are comfortably seated about the living room, music and entertainment which is brought in through the all-electric radio set, is enjoyed by all.

A Colonial Farm

(*Continued from page* 12)

storage tank. A considerable amount of water, 14,715 gallons, was heated during the year in which records were secured. An average amount of 3.4 gallons of water was heated through a temperature rise of 105 degrees F. by one kilowatt-hour. An adequate supply of hot water in the farm house adds much to the comfort and convenience of the occupants and is of immeasurable aid to the farm housewife in her duties.

It is easily seen from the figures cited that electricity is a real hired hand on the Ham farm, one which not only provides economical power, heat, and light for farm work but is also an indispensable servant in the household, ready for work every day in the year.

Portable motor operating concrete mixer.

EXIT—RAW LIGHT!

Enter—A New Lighting Comfort Through Simple Recipes for Special Shades We All Can Make*

By MARY E. WEBBER

TO many it is disheartening to see the days shorten and to know the happy out-of-doors evenings must give way to the oncoming longer winter ones indoors. We forget temporarily that today electricity offers a compensating security against the darkness, a glowing charm, and an enchanting snugness to the home.

But perhaps this is not true in your home. On the contrary when you turn on your lights do your rooms look cold and uninviting with harsh shadows, and do your eyes feel squinty and get tired quickly? Just cast a critical inquiring glance at your lighting fixtures, and if you can see bare bulbs, the difficulty is easily diagnosed. Why you are using raw light! And raw light is as bad for the vision as many raw foods are for the digestion, and it's devastating to the appearance of a home. Just as other raw materials must undergo certain processes, bare lamp lighting must be converted into soft comfortable illumination before it is fit for use in the home, and this is simply accomplished by proper shading. There are several successful recipes, but we will tackle only one at a time.

It is the unusual home that doesn't have at least one of the fixtures of the type shown in Illustration No. 1 with anywhere from one to six sockets, equipped with round bulb lamps. To prevent their being piercing, blinding sources of light, usually the lamps are of low wattage with the result that the fixture produces insufficient light for good seeing. The story is very different, however, as Illustration No. 2 clearly shows, when we change the inadequate lamps to standard 40 or 60-watt ones (depending on the number of sockets) and shade them with such light-colored inverted shades as are shown. Inverted shades are specially designated so that the larger opening will be at the top to allow light to escape to the light-colored ceiling and thence be distributed generally throughout the room, and the smaller opening at the bottom to protect the eyes of those sitting in the room from the discomfiture of seeing the lamp bulb.

The joy in these shades is not

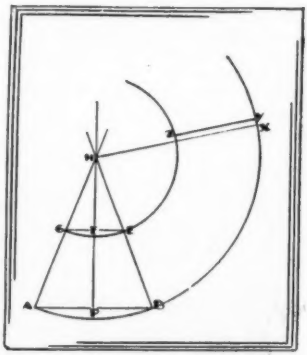


Fig. 4. Diagram for drafting a pattern for any fitted lampshade.

*The first of a series of articles which gives directions for making shades which so conceal the bare lamps in lighting fixtures as to produce new lighting usefulness and comfort. Further information may be had by writing the Editor.

alone in living with them but in making them for they are actually as simple as they look. First we need two rings as illustrated (Fig. No. 3). The fitter in this case, a 1½" ring dropped ½" from the upper ring by support rods, is thus designed to rest on the neck of the lamp bulb and so hold the completed shade in place. (Fig. No. 3).

And next we draft a pattern from which we can cut out the shade so that it will exactly fit the two rings. In the lower left hand corner of a large piece of wrapping paper draw a horizontal line (AB in diagram, Fig. 4) equal exactly to the diameter of the larger ring (4¼"). At the center P erect a perpendicular and on this measure up 4", the height of the shade (PF). At this point draw a second horizontal CE parallel to AB and equal to the diameter of the smaller ring (3¼"). Connect the points A and C, B and E, with lines which extend until they cross the perpendicular at a point which we will call H. With the point H as a center and the distance from H to C as the radius, swing an arc (a piece of string with a pencil on one end and a tack on the other will serve as a compass). Do likewise using HA as a radius. Measure the circumference of the larger ring and mark off this distance on the lower arc, AX. Connect H and X with a line and parallel to this draw a second line ½" away, ZY, which is the seam allowance. Then cut out ACZY and hold around the rings to be

Fig. 1. The light from bare lamps is raw, harsh, unkind both to our eyes and to the appearance of a room.

sure it fits and that no error has been made in measurements, before cutting out the parchment.

Very translucent parchment paper sufficiently heavy to support the rings is the most satisfactory material. Each shade requires a piece approximately 6" x 14". This we color to be in harmony with the room in which it is to be used, bearing in mind that intense colors absorb and thereby waste light so that we want to utilize only the very palest tints. Pale yellow or peach, ivory, or a light parchment color prove most desirable because they are most economical of light and are, too, the most flattering colors to people as well as to interiors. When intense colors are needed for decorative value, they may be introduced in the binding or in borders. Oil paints, mixed with a very few drops of turpentine, are recommended and should be applied in a circular motion with a small wad of cheesecloth (*slightly* moistened in turpentine). If the inside of the shade is colored at all—and it needn't be—it must be kept very light so that the shades will be generous givers of light. The shade may be decorated with borders, perpendicular or criss-cross lines, but it is wise because of its small area to keep it plain.

Sew the parchment to the rings with an overcast stitch, keeping the stitches, which may be as wide

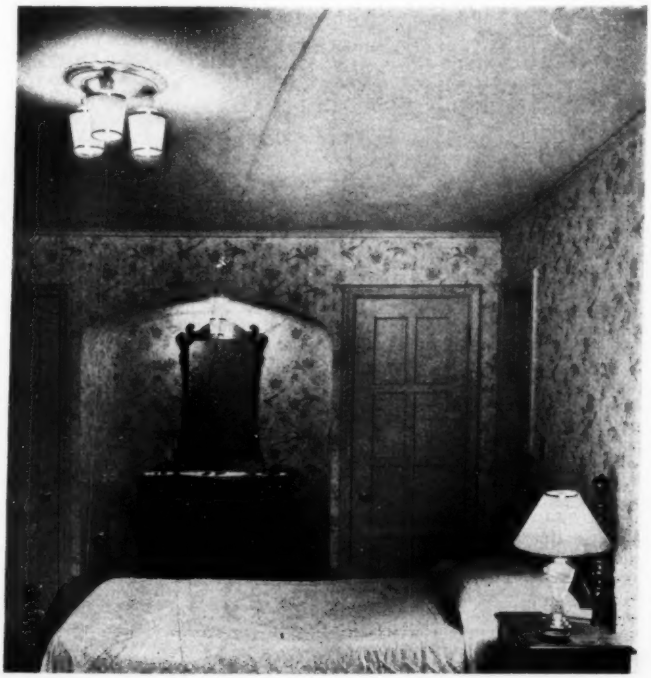


Fig. 2. These inexpensive and easily made shades make over not only the lighting but also the room! They are tinted a pale peach to match the bedspread and are bound in a deep blue velvet that harmonizes with the rug.

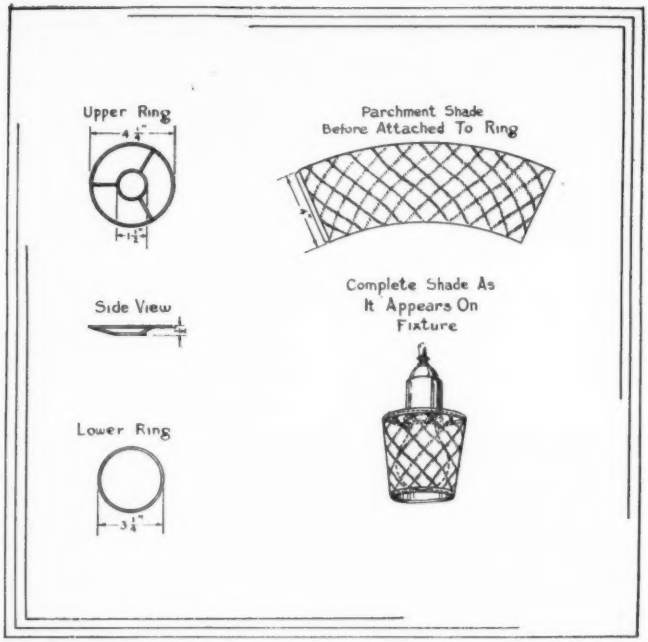


Fig. 3. Details in the making of parchment shades.

apart as ¾", very close to the ring. When both rings are attached, adjust the seam so that it is straight, and fasten either with two small sized wire shanks or with a good glue. Bind with an invisible stitch on the right side and a long stitch on the wrong with velvet, ribbon, or bias binding which is about ⅝" wide. Each shade requires ¾ of a yard. Or it is possible to use bias leatherette binding that is all gummed and may be stuck on, but when this is used care must be exercised to stretch it very tightly and to moisten only a few inches at a time. Stick the right side carefully first and then turn the inside under the wire frame.

You'll be amazed at the simplicity with which these go together and once you've lived with them in any of your rooms, you'll wonder how you could have existed so long with raw light!

To Beat the Depression

"Say, Jim," said the friend of a taxicab driver standing in front of the vehicle, "there's a purse lying on the floor of your car."

The driver looked carefully around and then whispered: "Some times when business is bad I put it there and leave the door open. It's empty but you have no idea how many people will jump in for a short drive when they see it."

Preparedness

Pat was a logger. Also he went pretty strong for alcoholic beverages. One day when he was somewhat oversubscribed with mountain dew he heard a rattle at his feet and saw a rattlesnake coiled and ready to strike. Pat straightened up and eyed the reptile with lofty contempt.

"Go ahead and strike," he said scornfully, "never will ye find me better prepared."

Poultry Needs

REFRIGERATION

Electrical refrigeration enables the poultryman to market his products when prices are higher; it also reduces spoilage losses.

By J. C. SCOTT
Agricultural Engineer

WHAT is the importance of refrigeration to the egg and poultry producer?

If asked that question a few short years ago, most of us would have said none. But men who are familiar with the marketing of poultry and eggs in the large cities of the United States today, claim that the existence and future development of the poultry industry, from the producers' standpoint as well as others, probably depends more upon refrigeration than on anything else.

The producer who lives near towns where there are no cold storage facilities for holding the eggs and no refrigeration car service might profit from the experience of Mr. Omar O. Ort, living at Azwell, Washington. He produced and marketed eggs for years under the old system of dumping them on local markets when eggs were low in price. There was no cold storage establishment in his neck of the woods, so Mr. Ort arranged for that himself.

On his ranch was a root cellar, in which he boarded up a room 11 feet 6 inches by 15 feet 6 inches by 7 feet high. The walls and top he insulated with not less than 18 inches of sawdust and the floor with 6 inches of cork. Here he installed a refrigeration unit of ample capacity to keep the room at the desired temperature.

The eggs from 1,500 of Mr. Ort's layers, and also the eggs from some of the neighbors' poultry farms are stored through the low-price season in this cold storage room. They are sold in the high-price season, and the difference in the egg receipts of one year pays for the entire cold storage plant.

Some egg and poultry marketing firms no longer make an effort to sell either broilers or hens unless there is a demand for them. When the supply is heavy the birds are drawn, frozen, and kept until there is a demand for them, regardless of what season of the year it may be.

A Plant to Fit Needs

And here again the farmer living in territories where there are no central cold storage facilities can have a farm refrigeration plant to suit his needs. He can get all necessary information regarding its construction and the machinery required from reliable refrigerator and cold storage supply companies. The progressive farmer who sees how things will be done in the future might do well to prepare cold storage facilities for his neighbor as well as himself, as Mr. Ort has done. The farm revenue may be materially increased in this way.

The modern trend of electric refrigeration in homes will no doubt help the business of the poultry

Broilers are kept in cold storage plants until there is a demand for them, instead of being dumped on the market as soon as they have attained a suitable size to be eaten.

One of the large cold storage plants of Washington, where eggs are kept through the low-priced season.

producer as well as the business of those producing other perishable foods. With a refrigerator in the home, the housewife no longer hesitates to buy these foods. She knows that she will be able to serve them in good, healthful condition and buys them in larger quantities.

Much information can be obtained from the United States Department of Agriculture and the State Experiment Stations through the County Agents, and also from refrigerator companies, with reference to keeping all perishable foods under cold storage.

Dr. Mary E. Pennington and assistants of the Federal Bureau of Chemistry, in their investigations into the methods of preparing poultry for market, make some excellent suggestions.

Stopping Losses

The loss of quality with dressed poultry starts with improper killing, or even before the killing. Poultry should be starved 24 hours before slaughtering. Allow, however, a liberal supply of clean water only during this period. This practice results in almost completely emptying the intestinal tract of foods in process of digestion and of the waste products to be thrown off.

The fowls should be killed in such a manner that they may be thoroughly bled and permit of the easy removal of the feathers without the use of hot water.

When Not to Scald

The Bureau of Chemistry has pointed out that scalding thickens the skin and breaks down its outer layer. It is the outer layer which is the barrier to bacteria. When dry picked the outer layer of skin continues as a protection.

Do not scald the chickens that are to be kept in cold storage. Scalded birds do not possess the finished appearance, nor do they keep as well, as the dry-picked fowls.

After the chickens are picked they are "pinned," the feet scrubbed if they are dirty, and at once placed in a mechanically refrigerated room. Freeze quickly and thoroughly. This is the secret to modern refrigeration of meats.

Poultry does not keep in prime condition in average ice box where the temperature is about 45 degrees F., and poultry held at this temperature should be disposed of in a day or two.

Water, a Source of Profit to the Dairyman

THAT most dairymen could make a profit on water is evidenced by the statement of Mr. W. L. Markham, dairyman, Rainier, Washington, who says:

"I was milking fourteen good cows when I installed water cups in the barn, giving the cows an opportunity to drink as often and as much as they wanted.

"These water cups raised the amount of milk that I was getting by four gallons per day, and the cows held this increase during the entire winter.

"I can't say enough for having water, and plenty of water in front of the cows at all times.

"The increase in milk production paid for the water cups in a very short time."

Mr. Markham is always looking for something to help the cows, as the betterment of the general health and comfort of the cows is his source of profit.

The cows are milked with a milking machine, and he says:

"The milking machine is not only a life saver with regard to labor, but I get more milk, as the cows seem to enjoy being milked by the machine more than by hand.

"We also have lights, radio, and other electrical appliances in our home, but the most important thing that electricity does for us on this farm is to pump the water for use in the barn and home."

Bitter Jolt

"This hurts me worse than it does you," remarked Police Judge Cavin Muse of Dallas, Texas, when he fined his daughter $13 for running past the stop sign and then dug down and paid the fine himself.

ELECTRICAL HOUSEKEEPING

Conducted by GAIL MEREDITH

Garden to Can

IF you are going to can your garden this fall, I hope you have Farmer's Bulletin 1471-F, "Canning Fruits and Vegetables at Home," from the United States Department of Agriculture. This bulletin tells you how to do it and why to do it that way.

The past four or five years have not developed anything particularly new about canning, the Bureau of Home Economics says. The most important things for the canner to remember are still these simple points:

"Two hours from garden to can to insure fresh, sound products.

"Use the hot pack method when possible so that material at the center of the can will reach the necessary processing temperature more quickly. Non-acid vegetables are always more satisfactory if hot packed.

"Can non-acid vegetables under steam pressure because they require sterilization at a higher temperature than that of boiling water."

We talk glibly about "cold pack" and "hot pack" as though they themselves were distinct methods of canning. They really are not, as a writer from the Bureau points out; they are just steps in filling the jars. The fruit or vegetables are cooked for a short time and packed boiling hot. Sometimes the fruit is packed into the jars and covered with boiling syrup, then processed for fifteen minutes or so. But with this method the fruit shrinks and the jars are not full when we get through. They are when we heat the fruit first and pack it hot. If you will run your eye down the time table for canning with a pressure cooker, you will see that five minutes cooking is enough for many hot packed fruits.

The non-acid vegetables like string beans, peas, and corn should be cooked in the pressure canner because the bacteria in these vegetables are able to outlive a good deal of heat. You could destroy them by cooking them for six hours in a water bath, if you kept the water boiling, but by the end of that time, you would have boiled all the flavor out of the vegetable and ruined its texture as well.

Ten pounds pressure in a canner gives you a temperature of 240 degrees very quickly. This is too much for these menacing bacteria, and you can destroy them without overcooking the vegetables.

Pressure Cooking is Fast

In thirty or sixty minutes cooking in the steam pressure canner, the Bureau of Home Economics says, you can accomplish what otherwise would take six hours boiling at 212 degrees. That means a considerable saving of time as well as food.

The ubiquitous tomato is the exception to this general rule for vegetable canning because the bacteria that cause most difficulty in canned vegetables does not get along well in the acid tomato. Then, too, it does not need so much

heat because tomatoes are so juicy that the heat penetrates very quickly to the center of the can when it stands in boiling water. They can with perfect safety be canned like fruits at the temperature of boiling water.

• • •

Do You Like to Wash Dishes?

PERHAPS there really are women who do not mind doing dishes. When anyone tells me so, though, I always want to reply in the words of the little girl whose mother had just reminded her reproachfully that hundreds of little girls would be glad enough to eat her spinach.

"Name three."

Our dislike of the job is one of the first reasons for turning it over to a machine. Another may be the greater cleanliness of the machine method, or the time it saves, and a last one the opportunity for reorganization of our work so dishwashing will come in the morning and at noon, or perhaps just once a day.

Some of the new dishwashers are built into a kitchen sink and are installed like any other plumbing. Others are portable tubs we can roll about our kitchen anywhere. They are almost as convenient to use for most of them fill and empty themselves. One has a goose neck pipe that cranes over the edge of the sink and turns up an expectant nozzle directly under the hot water faucet. It has a pump, too, that pumps the dirty water out before the rinse water goes in, and pumps the last rinse water out, leaving the tub clean and shining like a dish when the washing is done.

I said that greater cleanliness was one advantage of the machines. There is no question about it, they wash dishes really clean, not just visibly clean, but, so tests in a Chicago bacteriological laboratory tell us, free from bacteria as well. Banishing the questionable dish cloths, the use of much hotter water than we can bear our hands in, and really thorough rinsing account for the difference.

A few years ago Mrs. J. O. Shroyer of Glenview Farm at Humboldt, Nebraska wrote me about a dishwasher that she had used for ten years. She was most enthusiastic about it, even washing the separator in it. Like all good farmers the Shroyers are very particular about washing the separator, too.

"We find that it can be washed better in the machine than by hand," wrote Mrs. Shroyer. "I rinse off the different parts, especially the discs, then put them all in the machine and wash them in moderately warm water. Then I draw that off and rinse them with scalding hot water. They are so hot when they come from the machine that they need little drying."

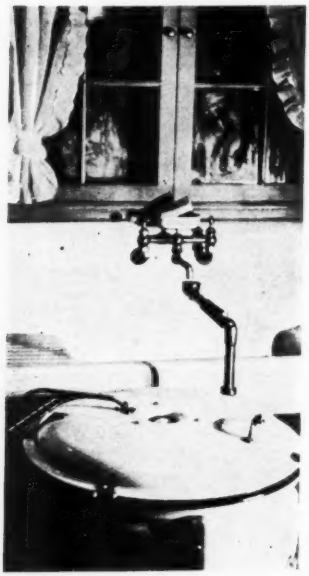
Dishwashing machines will do all of the table dishes. They will not chip fine china nor crack the glasses. Most of them do not attempt the pots and pans. One or

A convenient dish washer

two manufacturers have built a motor driven brush into their machines to scrub the kettles. I have not seen these work so I do not know how far they go in completing the job.

Perhaps you think saving time on dishwashing is not a particularly important thing. Could you use ten days, ten 10-hour days every year for your own affairs? That is the very lowest estimate of the time these dishwashers save. But then, probably you did not know that if you wash the dishes for an average family, it takes you forty 10-hour days every year. Tests in Illinois, at Purdue and Minnesota report the saving of from one-fourth to one-half of that time. There is a ten to twenty day vacation, then, every year of our lives if we wash our dishes with machinery.

This saving of time comes about in various ways. Getting the dishes



The portable dish washer can be filled from the tap.

Ready for the water.

ready for the machine, scraping and stacking them takes just the same work and time it would take if we were going to do them in a dishpan. But once the dishes are in the dishwasher, the washing and rinsing go forward at a good clip. There is five minutes for the washing, and one for each rinse. To this we need add only time enough to empty the water and put in fresh. While the machine is doing its work, we can wash the cooking dishes and wipe off the table and stove.

Then when we lift the cover of the machine and the air strikes the hot dishes, they dry instantly. The silver will need a little polishing, and our glasses will shine better with a brisk rubbing, but everything else can go up on the shelf without more attention. We can even roll the dishwasher over to the cupboard to save steps in putting the dishes away.

If we wash dishes once a day, we save the working time of the other two operations. And with our dishes all neatly scraped and packed in the machine out of sight, the kitchen is going to be just as neat and orderly as the most exacting housewife demands. We can do them when it is most convenient, the next morning or at noon, not when we want to be visiting with our family or resting a little out on the porch.

• • •

Stuffed Tomatoes

WHEN it comes to tomatoes no one is lukewarm; he is either for or agin. It is too bad to be on the wrong side of the fence because tomatoes are lovely

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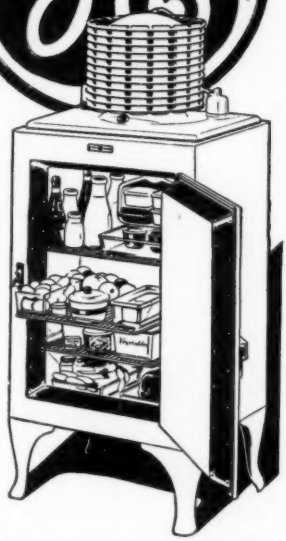

GENERAL ELECTRIC

ALL-STEEL REFRIGERATOR

Baked Stuffed Tomatoes

to look at, highly nutritious and rich in four of those important vitamins the world of food technicians has discovered.

Our grandmothers said, "Oh, eat them up; they're good for you."

Since this generation has been so busily discovering why, tomatoes have become year round food in many homes. To serve them steadily without boring your family requires some little ingenuity.

If you are searching for variety, the Bureau of Home Economics of the U.S.D.A. recommends that you go out into the garden some of these first cool days when the tomatoes are big and round and red, and pick some of the fattest and firmest of them to stuff for supper. They do not mean a dainty salad stuffing either, but a good hearty filling that makes of the tomato a dish substantial enough for the body of the meal.

Baked Stuffed Tomatoes

6 large firm, ripe tomatoes
6 strips bacon
2 tablespoons parsley, chopped
1 tablespoon onion chopped
1 cup dry bread crumbs
¼ teaspoon celery seed
½ teaspoon salt
⅛ teaspoon pepper
1 cup buttered bread crumbs

Wash the tomatoes, remove a thin slice from the stem end, and carefully scoop out the pulp so that the tomato shells will not be broken. Fry the bacon until crisp, remove from the pan, and break the bacon into small pieces. Add the parsley and onion to the fat, cook for a few minutes, add the cup of dry bread crumbs, celery seed, salt, peper, crisped bacon, and tomato pulp. Stir until well mixed and add more salt if necessary. Fill the tomato cups with this mixture, cover the top with the buttered crumbs, place in a shallow baking dish and bake in a moderate oven for 45 to 60 minutes, or until the tomatoes are tender and the crumbs are brown. Serve from the baking dish.

Baked Tomatoes with Shrimp

2 tablespoons butter
1 tablespoon green pepper chopped
1 tablesooon onion chopped
1 cup fine bread crumbs
½ teaspoon salt
⅛ teaspoon pepper
6 firm, ripe tomatoes
1 cup shrimp, canned

Melt the butter in a skillet and cook the pepper and onion for two or three minutes, then stir in the bread crumbs and the salt and pepper. Cut a slice from the stem end of the tomatoes and very carefully remove the pulp so the skin is not broken, and drain the pulp. Combine the seasoned crumbs, the tomato pulp, and the shrimp which has been rinsed in cold water and cut into even pieces. Add more seasoning if necessary and mix well. Fill the tomato cups with the mixture and sprinkle a few buttered crumbs over the top. Bake in a moderate oven until the tomatoes are tender and the crumbs are brown.

Baked Eggs in Tomato Cups

Scoop out the centers of large, firm, ripe tomatoes. Sprinkle the tomato cups lightly inside with salt and dot with butter. Break an egg into each tomato, sprinkle with salt, pepper and fine dry bread crumbs, and dot with butter. Bake in a 350 degree oven until the tomato skins are slightly wrinkled.

• • •

On Time

PROBABLY you have seen electric clocks by the score. They look just like any other clock except for that tail of wire that leads

A faithful timepiece.

away to some convenient outlet where it is plugged in. But inside they are different.

Not so much those that are wound by electricity, to be sure. Those clocks have the same levers and wheels or pendulums as the clocks we are familiar with. They need the same oiling, cleaning and adjusting. Only you cannot forget to wind them because a little motor does that for you. If the current is cut off so the motor stops, they will run from six to twenty-four hours afterwards.

But those that run entirely by electricity are very different indeed. They have nothing inside the case, I am told, but the tiny synchronous motor that turns the hands of the clock. They are amazingly simple and absolutely accurate, for the motor is timed by the exact and accurate timing of the machines that make the electricity down in the power plants, and these, many, many of them are regulated by a master clock checked with the time signals from the Naval Observatory at Washington. You set them, plug them in, and the time is delivered over the wire so long as the current runs.

When an interruption occurs the clocks stop. Some start themselves when the electricity flows again; some restart if the interruption has been no longer than three or four minutes, and some you have to start by hand.

Each has its points. Some people prefer one and some another. The majority of the clocks, I believe must be reset by hand, but this does give you a chance for an accurate check on the time before the clock starts off again. There is nothing to starting an electric clock. With my own clock it is just a matter of turning the disk on the back till the hands tell the right time, pushing a little knob, and then giving it a brisk whirl to the left.

The clock manufacturers evidently believe that the American woman wants to be on time all over the house, for they have made clocks for every place but the bathroom or the attic, I believe. I do not at the moment recall seeing a clock specifically designed for either of these.

Take bed room clocks, for example. Some folks are their own

(*Continued on page* 34)

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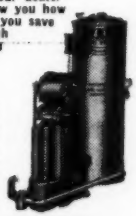

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Questions and Answers

Conducted by H. J. GALLAGHER
Agricultural Engineering Dept.
Michigan State College

Question: *Can you supply any information for the construction of an automatic switch to maintain a supply of water in a gravity supply tank? We have a* 1000 *gal. wood stave tank which we want to keep at least ½ full for filling sprayers. Water is pumped into the top of the tank at the rate of about* 10 *gal. per min. by a ½ H. P. motor. The pump is located about* 250 *feet from the tank, so that for the sake of economy, in wire and current, a single pole switch would be desired.*

Also, would it be practical to extend the delivery pipe from the pump down into the tank and use this as an outlet as well as inlet? As the pipeline runs right by the watering troughs could I not insert a tee in the line and, using a short length of pipe and faucet, use this pipe for filling the troughs as needed?

H. G. Butler,
Waterport, New York.

Answer: To extend the delivery pipe from the pump near the bottom of the tank and depend upon using the same pipe as a discharge pipe from the tank would operate satisfactorily as a siphon if the pipe remained full of water and no air formed at the top of the pipe. A better way would be to enter the side of the supply tank about two inches from the bottom with the delivery pipe from the pump. The same pipe could be used as a positive discharge pipe on the gravity systems.

There are low priced toggle switches on the market equipped with a lever arm which is operated by a float in a supply tank. Such a switch can be readily regulated to open and close at various water heights. A good home-made outfit consists of a vertical rod attached to the top of an empty mason jar. The jar is the float and the rod should be free to travel in guides which hold it in place before an ordinary toggle switch; bumpers on the rod operate the switch as the water pushes the float upward or gravity pulls it down. The distance the bumpers are apart on the rod determine the water levels established. A block of wood or any buoyant material may be used as the float. If the switch trips hard, increase the length of the control.

• • •

Question: *I wish to run electric wires from my house to the garage in watertight iron pipe under the ground. Will it be necessary to use lead covered wire or will ordinary weatherproof wire serve the purpose?*

Kindly inform me how to wire the following: I wish to have a spotlight on the outside of the house, also one on the outside of the garage, both to be controlled by two way switches at the house and garage. I wish to have two lights in the garage to be independent of the two spotlights on the outside and to be controlled by snap switch in the garage.

How many wires must be run from the house to garage, etc.?

J. H. Coates,
Moberly, Mo.

Answer: Do not use weatherproof wire on any enclosed job. Ordinarily it would be cheaper and more satisfactory to use lead covered cable for underground construction than watertight pipe.

However, for a short distance and where a relatively small amount of current is needed, as in your problem, rubber covered wire

in a watertight pipe should prove satisfactory. No. 14 wires would carry sufficient current 100' to operate seven 100 watt lamps on 110 volt service. If motors or other equipment will be used at the garage, larger wire will be needed and the greater the distance the larger the wire.

To operate a yard light at the house and garage simultaneously, with two 3-point switches, and single point switch control for the garage lights, requires five wires. Lay out five horizontal lines and mark them 1, 2, 3, 4, and 5. Use one and two as dummy wires between the three point switches. Use lines three and four to connect two yard lamps in parallel. Line five is the live wire between the house and the garage. Line four is the ground wire of both circuits; four and five start from distribution cabinet. Connect one 3-point switch terminal to line five, the other to line three. Four and five are used for garage lighting circuit, connect single pole switch in number four. Connect garage lamps in parallel, either circuit works independent of the other.

Use one inch pipe for six of the No. 14 wires.

• • •

Question: *I have a few questions to ask about motors.*

What percentage of its full load current will a small motor under 1 h.p. draw when idling at no load? Will the percentage be the same for a 3 or 5 h.p. motor?

In case the motor is working at part load, will it draw current in direct proportion to its load?

Isaac Longacre,
Spring City, Penna.

Answer: In considering the current a motor draws on no load, and at rated load, allowance must be made for the current demand in amperes and the power factor which is the true power divided by the apparent power.

A motor operating on no load will give a current flow in amperes about the same as the ampere rating on the name plate of the motor for normal load; however, the power factor is low. As the load of the motor increases to normal, the power factor improves without much increase in the ampere reading. The increase in power factor is not in direct proportion to the increase in current flow as the ampere reading times the voltage times the power factor equals true power. While the ampere reading of a no load motor may be as great as the same motor at rated load, the amount of energy as registered on the watthour meter would be less at no load than at full load.

The difference between the input registered on the watthour meter and the output remains fairly constant as the load increases.

As motors increase in size, the efficiency increases under their respective normal loads.

The efficiency of a motor is the motor output divided by the motor input. A motor having an efficiency of 65% means that the power delivered by the motor is only 65% of the power supplied to the motor.

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P.O..... State.....

ON THE AIR

Conducted by
JEROME J. HENRY

Radio Brings Ed Wynn to Listeners

ED WYNN, that silly zaney of the theatre likes to face an audience even when he broadcasts.

Across the arch of the Times Square studio where Wynn goes on the air every Tuesday evening at 8:30 p.m., Eastern standard time, engineers have stretched a thin cable. Suspended from the cable and hanging eight feet above mid stage footlights is a square metal frame from which two microphones hang downward.

Beneath this novel arrangement Wynn may step to the front of the stage, and carry on for the benefit of the audience just as if were in a theatre. Incidentally, Wynn performed in the same studio 18 years ago, but it was not a studio then. It was the New Amsterdam Roof Garden, home of Ziegfeld's midnight frolics.

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Gene and Glenn Entertain at Breakfast

ALL over the country listeners rush through their "before breakfast" preparations so they can be ready to hear the comic strip of the air at eight o'clock. The vocal antics of Jake and Lena were created by Gene and Glenn.

About three years ago Gene Carroll and Glenn Rowell, the last remaining members of two former radio teams, created the fictitious characters, Jake and Lena. The romance of this mid-western Romeo and Juliet became so popular that it was extended from WTAM in Cleveland to a nation-wide network.

Both of the comedians were born in Illinois, Carroll in Chicago, and Rowell in Pontiac. Their early lives were spent in various theatrical and entertainment capacities. Carroll went into musical comedy and vaudeville, which he deserted in favor of radio, and Rowell gained his early experience as a pianist, trumpeter, soloist, music publisher's representative, and organist.

The creation of Jake and Lena was accidental. One day a radio program called for a feminine voice. Gene was invited to fill the role and did so in a high falsetto which amused the listening public. Later he was called on for another impersonation, this time that of a male character, and he affected a catching dialect. The studio people began calling Gene, Jake.

"Say, Jake, how's your girl?" someone asked one day.

"Who, Oh, you mean my girl Lena?" In that way the voices secured their names, and Jake and Lena were accepted as real charac-

There's plenty of monkey business in the studios when Olsen and Johnson are on the air. The famous veterans of the stage are now guffawing on the Fleischmann Hour with Rudy Vallee.

ters. Almost without preliminary plan a radio plot developed around the two characters.

• • •

An Early Start to Radio Career

TEN months old, blonde, curly, and blue eyed Constance McWicker claims to be a foremost contender for the title of the "world's youngest radio star."

She possesses such an appealing "gurgle" that when she went on the air on a network of West Coast stations, the station switchboard was flooded with calls demanding to know, "was that a real baby we just heard?"

Being a good natured baby, she laughs and coos into the microphone every time she is permitted to be held near the "odd-looking box" which holds an eternal fascination for her, and cries into it just as obligingly every time her mother takes the bottle away from her.

• • •

Seeks Ten Most Popular Hymns

DESIRING to learn which hymns are the most popular in the United States, Seth Parker, who, with "Ma" Parker and their Jonesport neighbors, are heard every Sunday evening, invited his listeners to write the names of their ten favorite hymns in their letters to him.

The early results of the plan indicate that different hymns are favorites in different parts of the country.

A majority of the listeners in the East start their list with "The Old Rugged Cross," and frequently mention "Onward Christian Soldiers," "Rock of Ages," and "Lead Kindly Light."

Missourians have shown a marked preference for "Jesus Saviour Pilot Me," "I Need Thee Every Hour," and "In the Garden," while in Ohio scores of listeners suggest "I Love to Tell the Story," "He Lifted Me," and "When the Roll Is Called Up Yonder."

Favorites of Oregon show a

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Harvey Hays, who won radio fame portraying outdoor roles in dramatic programs, takes the part of the veteran Forest Ranger in a weekly program now under the direction of the United States Forest Service. It is broadcast over an NBC network every Thursday at noon, Central Standard time.

marked difference with those of the East and Midwest. "Ring the Bells of Heaven," "Sunlight in My Soul," and "Ninety and Nine," head many lists from the rose state.

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On Time

(*Continued from page 29*)

alarm clocks and start up broad awake at just the proper hour every day of the week. But most of us are not set that way. We need to have something else wake us up. Electric alarm clocks designed for bed rooms of every color are made of bakelite or delicately colored enamel. There are clocks with dark dials and figures and hands made of some metal that gleams faintly at night. This same clock has a tiny lamp inside, as tiny as the littlest flash light bulb. You can reach out and push a switch that turns this light on and illuminates the dial if you want to convince yourself that it really was two-thirty, after all.

Clocks in the kitchen have other business than insuring meals on time. They are an important part of many recipes in modern cook books. Where my grandmother's mother timed the breakfast eggs by singing a favorite hymn tune, I look at the clock. Looking at the clock instead of into the oven, measures the progress of bread and cakes, too.

The new kitchen clocks that hang on the wall are generally made of metal or wood, enamelled in colors various enough to fit the most imaginative kitchen. They have big generous figures you can see across the room, and are entirely reliable watchmen for the cooking you do.

The world runs on time schedules. Unless we are hermits indeed, we cannot escape them. The children must get to school on time; the milk must be ready for the truck on time; we must all get to church, and meetings, and lodge on time. The interior decorator has admitted that it may be a good thing to bring the clock back into the family living room. That is consoling for those of us who never took it out, isn't it?

The makers of electric clocks have put their machinery into cases that are both dignified and beautiful. Bakelite mahogany, lacquer, wood or metal, there is a model for every home. Many of them are reproductions of the exquisite old clocks the making of which was America's first big industry, and the banjo clock and the Grandfather clock find beautiful expression in these modern timepieces.

Some of these clocks are silent for those who like them so. Others strike the hours, and others still, have silvery chimes to mark the passing time.

CLASSIFIED ADVERTISING

POULTRY RAISERS—RURAL SERVICE MEN. Write for free bulletin on ELECTRIC POULTRY Equipment, including Brooders, Incubators, Heating Thermostatic supplies for home made equipment. Lyon equipment is proven under all climatic conditions. Investigate. LYON ELECTRIC COMPANY, 2075 Moore St., San Diego, Calif.

PROTECT YOUR POULTRY HOUSE against THIEVES this winter, with the new 356 BURGLAR ALARM PANEL. Only $8.00. Order one from your DEALER today or send Postal Money Order to MIDNIGHT ALARM SYSTEM, 356 Chickasaw, Cincinnati, Ohio. Write for circular F.

Front Cover Title Contest

JULY COVER

Rules for September

There will be one first prize of $25.00 and five second prizes of $5.00 each. In case of a tie, each winning contestant will receive the full cash prize to which he or she is entitled.

All members of the farm family to whom this magazine was sent may submit titles, but each contestant may submit only one title.

Titles should not be longer than 15 words—the shorter the better—and they need not be rhymes.

Send your title on the coupon below or make out a similar form on a plain sheet of paper or government post card.

Question "A" must be answered correctly.

Entries must be sent to the Title Editor, ELECTRICITY ON THE FARM, 24 W. 40th St., New York, before October 1st.

Winning names and titles will be announced in the November issue.

Follow these simple rules. Your Editor cannot answer letters about the contest.

Winners for July

1st Prize—$25.00

"Not so sure of his dividends yet,
But he's got the principle, you bet."

Dwight H. Dilley,
R.F.D. 1, Hebron, Ind.

The following have been awarded $5.00 cash prizes for their July titles:

"It's all bull, it can't be done."

Hoyle Winsett,
R.F.D. 2, c/o Mrs. A. W. Winsett,
Cooper, Texas

•

"A 'premature lead' you well may say,
But, soon she'll be milked the electrical way."

Mrs. G. H. Stover,
R.F.D. 2, Sanborn, N. Y.

•

"The right idea, but just a little too soon."

Mildred Fletcher,
R.F.D. 1, Champaign, Ill.

•

"For once the electric milker will fail
To fill the family milking pail."

Kenneth Turner,
R.F.D. 4, Shawnee, Okla.

•

"A pull in the right direction by a farmer of the future."

Mrs. Henry Geer,
R.F.D. 3, Box 114, Williamston, Mich.

My title for the September Front Cover picture of ELECTRICITY ON THE FARM is.....

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(a) What is the oldest piece of electrically-driven equipment on your farm? (Give brand or manufacturer's name also.)

.....

How many years has it been used?.....

My name is.....R. F. D.....

Post Office.....County.....State.....9-32

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